Environmental Justice Working Group
Minneapolis Climate Action Plan
Recommendations
January 17, 2013

1. Introduction

This document is the result of 11 months of engagement with the City of Minneapolis on addressing environmental, economic and racial equity concerns within the City of Minneapolis' Climate Action Plan. An Environmental Justice Working Group was established in August 2012 thanks to the work of many environmental justice organizations and community members representing communities of color, Indigenous Peoples, and low-income communities, and leadership from City Council members and City staff. The intention was to ensure that the voices of the most impacted by both climate change and the policies that will be developed as solutions (namely communities of color, Indigenous, and low-income communities) were represented and supported within a decision-making capacity in the planning process. This effort was undertaken in acknowledgement that climate change is a serious problem that affects our communities, and in full support of the City's effort in developing a plan to address it.

This effort was critically needed as the Minneapolis Climate Action Plan's agenda was to address the transportation, buildings and waste sectors – three sectors that seriously impact environmental justice constituencies within the City. Currently in Minneapolis, people of color constitute approximately 42.3% of its residents; over half of residential housing (buildings) is occupied by renters, which tend to be highly concentrated in community of color and low income neighborhoods; energy bills for households between 75% and 100% of the Federal Poverty Level constitute 19% of their income, and even households with incomes between 150% and 185% of the poverty rate have energy bills above what is considered to be affordable. In Hennepin County it is estimated that there is a $106,116,061 shortfall in meeting the energy costs for those households at 185% or below the poverty level. Research studies have found that on a national level 60% of households that do not own automobiles are below the median income, and in the Twin Cities less than half of jobs are accessible via public transportation within a 90-minute commute.

The accumulated, historical, structural disadvantage of higher energy, food and insurance costs with lower quality housing, lack of access to economic and educational equity, and the large percentage of households at significant risk from adverse and unequal environmental risk, must be taken into consideration in any climate action plan. By not taking into consideration these issues, there is a real risk the city's Climate Action Plan will exacerbate existing persistent structural disadvantages.

Given the contracted timeframe and late inclusion of the EJ Working Group into the Climate Action Planning process, as well as the work of many on a volunteer basis to this effort, the edits represented here are an initial effort to start the conversation on environmental, racial and economic equity in environmental decision making in the city. The EJ Working Group reviewed all of the goals and strategy recommendations that had been developed throughout the year by the City's sector-based working groups that had minimal EJ perspectives. The review of the body of recommendations by the Environmental Justice Working Group found a large number of critical environmental justice concerns missing.

In addition to the content recommendations we outline in the Climate Action Plan below, the EJ Working Group also would like to highlight some key process recommendations resulting from the experiences of these past 11 months.

Process Recommendations for the Steering Committee:

1. The Steering Committee should put forward as a recommendation that environmental justice community representation in any future City climate/adaptation and sustainability planning be part of the effort from the onset.
2. The Steering Committee should recommend that the Sustainability Office:
    - Develop a comprehensive, cross cultural and multi-lingual outreach plan for the MCAP that includes partnerships with community groups and nonprofits already working on the ground.
    - Investigate the provision of providing resources (such as grants and stipends) for community members and environmental justice organizations for participation and outreach.
    - Provide staff training about environmental justice and how it can integrate into City sustainability efforts.

3. The Steering Committee should be transparent in how it prioritizes strategies for action, both in process and the metrics used.
4. The Steering Committee should acknowledge the time, expertise and effort put in by the Environmental Justice Working Group members to develop this document, on a volunteer basis, must be respected by the Steering Committee. The EJ WG reviewed not one set of strategies, but *all* Climate Action Plan strategies in a very contracted period of time.
5. The Steering Committee should recommend that the City Council adopt stronger global warming emissions reduction targets, at minimum adhering to the international protocols of limiting climate change to 2 degrees Celsius, and encouraging goals to limit climate change to a 1 degree Celsius increase.
6. The Steering Committee should recommend to the Mayor's Office and City Council that the City develop a formal commitment to environmental justice in its sustainability planning.

The content recommendations we highlight in the Minneapolis Climate Action Plan below are based on a body of robust climate justice principles and policy efforts that incorporate issues of racial, cultural, environmental and economic equity in climate and sustainability planning. Out of respect for the work the other Working Groups had put in, comments to their contributions are additions, with minimal editing of their initial language.

The following documents outlining the intersection of climate change and environmental justice (i.e. a climate justice framework), are included in an appendix for those wanting further reading:

- Twin Cities Peoples Agreement on Climate Change, May 2012
- Cochabamba Peoples Agreement on Climate Change, April 2011
- Mystic Lake Declaration, 2009
- National Environmental Justice Forum on Climate Change Principles
- Principles of Environmental Justice
- Mni ("Water") by Jim Rock

In full transparency to our community, we have also included as attachments the following Process Documents outlining the history of the creation of the Environmental Justice Working Group in the Minneapolis Climate Action Plan:

- Letter to City of Minneapolis from Environmental Justice Community, April 17, 2012
- City Response to Members of the Environmental Justice Community, May 9, 2012
- Environmental Justice Working Group Proposal to City, August 1, 2012
- City Response to Environmental Justice Working Group Proposal, August 7, 2012
- EJ Working Group Core Planning Group Response Letter, August 17, 2012
- Agendas of Environmental Justice Working Group Meetings
- EJ Working Group Members

Environmental Justice Working Group
Edits to October 30th Minneapolis Climate Action Plan Goals and Strategies

Minneapolis Climate Action Plan
EMISSIONS REDUCTION GOALS & STRATEGIES

October 30, 2012

Implementation Goals

Minneapolis will meet the adopted 2015 and 2025 greenhouse gas emissions reduction targets.

While meeting emissions reduction targets, Minneapolis shall:

1. Prioritize high impact, short timeframe, equitable, and cost effective strategies. Recent science suggests that immediate action (within 5 – 10 years) is necessary to bring down emissions to avoid severe impacts from climate change. This plan will prioritize strategies for implementation that may have the greatest impact on emissions in the short term. While seeking immediate impacts, this plan will acknowledge that we are regularly making decisions that may have impacts that will be felt for 50 or 100 years. We should always be cognizant of impacts on future generations and the impacts already occurring in the present in our most vulnerable communities.

2. Seek strategies with multiple benefits.
A key additional benefit to be targeted is the reduction in fine particulate matter. This acknowledges the research that fine particulate matter is a serious public health risk and has potential for reductions with climate policy as it is co-emitted with greenhouse gases. Wherever possible, implement strategies that provide a range of co-benefits (e.g., job creation, lifecycle cost savings to government or residents, improved public health, or broader awareness of climate impacts). Policy makers and the community will need to carefully weigh these multiple benefits and costs while moving Minneapolis towards its emissions reduction targets in an equitable manner. This plan should also avoid shifting emissions or impacts outside of the city.

3. Implementation of strategies will work to decrease, not widen, the current green infrastructure gap and environmental benefits between neighborhoods and communities. This acknowledges the current disparate state in housing stock, transit opportunities, waste collection, etc between neighborhoods, ethnic groups, and income classes in Minneapolis, and targets strategies to communities that could most benefit. Climate action strategies should be developed that ensure that activities undertaken do not disproportionately impact low-income communities. Neighborhoods that already have cumulative pollution impacts and high energy burdens should be prioritized for strategy implementation.[1] Financial investment should also be directed toward the most disadvantaged communities. A sound outreach plan should be developed for initiatives, in multiple languages, and utilization of existing community

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organizations.

4. **Monitor progress annually and revisit goals and strategies every X years.** The City of Minneapolis will continue to track community-wide greenhouse gas emissions and report on the implementation of climate action strategies and impacts. Reporting should include equity indicators to measure whether the Plan's strategies, financial investments, emission and energy burden reductions are being experienced across neighborhoods, income classes, and races equitably in the City. The City should also develop a fuel-poverty definition for use in evaluating project impact and success, and establish data collection practices. Revisiting of Goals and Strategies should include environmental justice representation from the onset of the process.

5. **Begin assessing and building resiliency to climate changes and impacts.** This Climate Action Plan deals primarily with reducing emissions to mitigate climate change. However, we know that changes to the climate are already being felt in Minneapolis, Minneapolis should explore the potential impacts and responses and build resiliency in local government and the community, with a specific eye to low-income and communities of color that are the most vulnerable.

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Buildings & Energy

Goals

1. Achieve **15 percent energy efficiency in residential buildings** from the growth baseline by 2025.
2. Achieve **20 percent energy efficiency in commercial buildings** from the growth baseline by 2025.
3. Increase **electricity from local site-based renewables & directly purchased renewables (like WindSource) from 1.5 to 5percent** of the total consumed by 2025.[2]
4. Achieve X percent energy efficiency in City buildings from the growth baseline by 2025.
5. Industrial?

Cross-Cutting Strategies

1. Develop a City Green Zone Initiative. The Green Zones Initiative will create a city designation for neighborhoods or clusters of neighborhoods that face the cumulative impacts of environmental, social, political and economic vulnerability. Communities with Green Zone designation would then be able to access benefits offered by the city (as well as state and federal agencies), ranging from targeted pollution reduction to increased funding opportunities for energy-efficiency, onsite renewable energy, and other low-emission infrastructure. Green Zone designation would ensure that communities most highly impacted by environmental hazards and economic stressors receive much-needed resources and support.

1. **Launch a City initiative to make Minneapolis the most equitably energy-efficient city in America.** Most of the energy in Minneapolis is consumed by businesses. Focus on efforts that large businesses/properties could undertake to reduce their energy usage. The aggregated potential energy savings from small businesses is also significant and must be supported. Research shows that the most effective energy efficiency programs succeed because they have committed leadership from the top. The City can use its leadership position to bring top City leaders to the table and affirm their commitment to working together to achieve this goal.

2. **Ensure that City facilities, across all neighborhoods, are models of energy-efficiency and renewable energy technology.** The City will investigate opportunities in buildings, street lighting, traffic signals and parking ramps to constantly increase energy efficiency and reduce water use. Those neighborhoods in immediate need (currently in need of streetlights, old housing stock, etc) should be prioritized. The water treatment plant is a large energy user, and opportunities for increasing efficiency will be continuously reviewed. Tools like the State's Guaranteed Energy Savings Program could be used to finance retrofits to city buildings. The City will continue to identify opportunities for renewable energy deployment on City facilities to reduce long-term operating costs and demonstrate new technologies.

3.Develop a Climate Jobs program that trains, hires, retains, and promotes a higher percentage of American Indian and Communities of Color stakeholders in jobs associated with the implementation of the Climate Action Plan strategies, both as employees and entrepreneurs. Use public investment to leverage engagement of all vendors involved in deconstruction, retrofitting or new construction of solar/energy-efficient buildings in the city to meet assertive hiring goals of the city. At minimum, the city

[2] The percent of Minneapolis' electricity consumption that is coming from renewables is calculated based on generation sources above and beyond Xcel Energy's average grid mixture. Sources like Wind Source and local, distributed generation would be counted towards the goal. In 2010, 19% of the fuel sources used by Xcel to generate grid electricity came from renewable sources.

should adhere to its existing minority contracting goals and, as soon as possible, up its standards to mirror actual city demographics.

4. **Develop a City of Lakes Energy Conservation Corps** that provides Americorps opportunities with higher education subsidies to low income residents and youth from low-income census tracts to get certified in conservation and green retrofitting, water conservation, community composting, and green houses.

3. **Support the State's adoption of the latest International Energy Conservation Code (IECC) and International Green Construction Code (IGCC) and adopt the IGCC locally.** The IECC and IGCC will change the building code to require new commercial construction be more water and energy efficient and more durable. If the IGCC is adopted at the state level as an appendix chapter, Minneapolis will need to adopt it locally before it can be in force.

4. **Incentivize energy and water efficiency in private buildings during every interaction with the City.** City departments could promote energy and water efficiency efforts to anyone interacting with the City for regulatory purposes (moving beyond compliance). This may be targeted towards certain kinds of buildings that showed high promise for targeted efforts on energy efficiency, such as restaurants.

5. **Require City-financed projects to meet an energy efficiency standard, like Sustainable Buildings 2030.** The State of Minnesota has adopted a requirement that all State bonded projects meet the SB2030 standards. This requires progressively better energy performance from new projects. Similar requirements include St. Paul's Sustainable Building Policy. Alternatively, or in combination, the city could require projects to complete Xcel Energy's Energy Design Assistance program. In conjunction, the City should review the ratios required for project financing (gap financing to overall project cost) to minimize any disruption to affordable housing construction that may be caused by implementing additional requirements.[3]

6. **Explore opportunities to restructure the mechanical permit fee schedule and other fee schedules to incentivize energy- and water-efficient products and renewable energy.** Mechanical permit fees for products like furnaces are currently based on a percentage of the total value of the work being performed. More energy efficient products are typically more expensive than less efficient products, increasing the permit fee, which could be a disincentive to contractors and building owners to install more efficient equipment. With Regulatory Services staff and stakeholders, explore changes to the permit fee structure (ideally revenue neutral) that would incentivize the installation of more energy- and water-efficient equipment or renewable-supportive building design (e.g., "solar ready" buildings).

7. **Determine the feasibility of establishing conservation-based pricing or structuring of franchise fees and using the franchise agreement to support renewables.** During the update of franchise agreements with utilities, Minneapolis should explore options to encourage energy conservation – through utility fee structure or the price passed on to customers. Examples could include structuring fees based on usage per customer or reducing fees if utilities meet energy efficiency/CIP goals. Franchise negotiations also provide an opportunity to plan for better integration of distributed solar PV into the grid (e.g., by linking up to the distribution system currently in place in many City rights-of-way).

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8. **Evaluate and expand incentives granted for high energy performance.** Density bonuses are currently available to developments in the downtown zoning districts achieving high energy performance and can be used as an amenity for a planned unit development to obtain approvals for alternatives to the zoning regulations. These bonuses should have safe guards to negate the possible negative impacts (displacement of low and moderate income households). These bonuses could be extended to areas outside of downtown and/or incorporated into other incentive programs. Extend these incentives to buildings that incorporate or are designed to allow for easy installation of significant renewable energy systems and to those in targeted under-invested communities (i.e. a City Green Zone program).

9. **Develop tools to finance energy efficiency and renewable energy retrofits for commercial and residential buildings that have low barriers to entry and limited risk for local government.** In order to maintain transparency for communities that may not meet the threshholds, the City should define "low barrier" and "low risk". Property- assessed, on-bill and other financial mechanisms could provide low-interest financing opportunities for homeowners and commercial properties and avoid opportunity costs, high interest rates or high barriers to entry. Working through a process led by the State of Minnesota, identify tools that the City or another regional entity can develop to provide more opportunities for energy efficiency and renewable energy financing.

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10. **Support the adoption and implementation of emissions reductions plans by other local businesses, including small businesses, minority-owned businesses, government entities and institutions.** Hennepin County and the University of Minnesota have adopted targets for emissions reduction. Other entities, like health care campuses, may also be taking action on greenhouse gas emissions. Minneapolis should support these and other efforts and collaborate on implementation. The University of Minnesota has adopted aggressive targets for reducing greenhouse gas emissions from their operations, including achieving net zero emissions by 2050. Whenever possible, Minneapolis will support the University's efforts to reduce emissions.

11. **Monitor new technologies and regularly reassess strategies. Encourage implementation when feasible.** There are many new technologies that could hold promise for energy efficiency and reducing emissions. Real-time pricing coupled with smarter appliances could reduce costs for electricity consumers and emissions. Advanced energy management technology could reduce wasted energy.

12. **Identify opportunities to increase conservation efforts within the downtown district heating and cooling system and make the system more efficient using technologies like combined heat and power.** The downtown district heating and cooling system, in total, represents one of the single largest loads in the City. Operated by NRG, the City is a major user, with connected loads including the Convention Center. Because customers on this system do not have access to utility conservation programs, there is an opportunity for the city to help increase the efficiency of the customers on this system. There may also be opportunities to make the district heating itself more efficient, for example, natural gas fired plants could be retrofitted to include combined heat and power generation. Every effort to reduce co-pollutant emissions should be made when considering opportunities. The City should work with Hennepin County and NRG to determine where these retrofits might make sense.

13. **Identify opportunities to expand the use of district heating systems to new and existing buildings.** The downtown district heating and cooling system provides an efficient alternative to individual building heating and cooling systems. Explore barriers to expansion into existing and new buildings in downtown. Identify opportunities for expanded district heating and cooling outside downtown with new or existing systems.

14. Work with Xcel Energy, Centerpoint Energy, and the District Heating Systems in the city to conduct a robust energy end use analysis to inform future energy planning efforts by the City.

Residential Buildings

1. **Help 75 percent of Minneapolis homeowners, of which X percent are low income homeowners, participate in whole-house efficiency retrofit programs by 2025.** The City of Minneapolis has provided initial support for CEE's Community Energy Services (CES) program, which has served about 4,800 Minneapolis owner-occupied homeowners, or a little over 5% of the target population. Targets for low and moderate-income retrofits should be established. To start, these targets should be based on the percentage of low-income housing that exists in the City of Minneapolis. The City could continue to help recruit homeowners into the program, and set a goal of 75% of homeowners participating, of which X percent are low income homeowners, in CES or similar whole-house retrofit program. As this program expands, the City should assess the geographic and household income distribution the program has achieved. The expansion of CES should be undertaken equitably across the City. Where possible, programs should be conducted jointly with other "healthy homes" initiatives like lead abatement."

4. . **Help Y percent of Minneapolis renters and landlords, of which X percent are low income renters/landlords, participate in efficiency retrofit programs by 2025**. Programs targeted to residential rental facilities should be expanded and ensure that low-income rental units benefit from their implementation. Targets for low and moderate-income rental unit retrofits should be established. These targets should be based on the percentage of rental housing and low-income rental housing that exists in the City of Minneapolis.

2. **Create time-of-sale and time-of-rent energy label disclosure**. New homeowners and potential tenants are a target group to promote energy upgrades, as they can be more receptive to needed upgrades, especially when financing is available. Tenants could also use an asset rating label to make comparisons about energy performance and cost between units or buildings. Minneapolis currently requires a home inspection prior to any Minneapolis home being put on the market, called the Truth-in-Housing program. The City could "green the Truth-in-Housing program" by including the collection of data sufficient to generate an energy label as well as other easily accessible data such as lead paint, history of superfund site, etc. In order to be cost-effective, data collection would need to be as limited as possible, while providing useful information to the homeowner. The Center for Energy and Environment has developed an energy label that is particularly relevant for Minneapolis housing stock that is currently being used in the Community Energy Services residential program, and could be expanded for use in the Truth-in-Housing program. A label for multi-family structures does not yet exist.

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3. **Connect and collaborate with other residential energy efficiency efforts**. This includes:

- Create partnerships of low income and supportive housing serving organizations to develop a delivery mechanism for onsite renewable and efficiency.
- Helping to promote and work with on-line energy efficiency efforts that build teams and help to increase energy efficiency awareness and actions, including the Minnesota Energy Challenge, and OPOWER's new Facebook application.
- Promoting appliance trade-ins through City events.
- Promoting the use of energy benchmarking in Minneapolis multifamily buildings, as through the

- Minnesota Energy Scorecards program: www.energyscorecardsmn.com

Commercial Buildings

1. **Continue to host an annual Energy Reduction Challenge ("Kilowatt Crackdown") for Commercial Buildings (large, midsize, small) in conjunction with the Building Managers and Owners Association (BOMA) and other partners.** BOMA has developed a program, called the Kilowatt Crackdown, which local chapters can implement. Building owners track their energy use, through the EnergySTAR Portfolio Manager tool, over the course of a year or two. This is compared to a benchmark of the previous year, and the buildings with the highest energy reduction receive awards.

2. Implement small to mid-sized business renewable and on-site renewable incentive programs. Market existing and develop incentive programs that are targeted to small and mid-sized businesses.

2. **Implement a Building Energy Disclosure policy for medium and large commercial buildings.** A disclosure policy for commercial buildings that requires publication of data annually will help increase the impact of energy use information in the marketplace, driving further energy efficiency improvements.

3. **Explore implementation of a commercial asset rating program, such as the Department of Energy's Commercial Building Energy Asset Rating.** Asset ratings provide a tool to evaluate the physical characteristics and as-built energy efficiency of buildings. An asset rating can also identify areas where improvements are needed.

4. The City of Minneapolis should incentivize commercial office buildings to investigate transitioning janitorial work to "Day Shift Cleaning" as a means of reducing energy consumed and work with janitors in their building to ensure a worker friendly transition. The city will also investigate the feasibility of implementing Day Shift Cleaning standards for commercial office buildings in the City of Minneapolis.

4. **Develop "green lease" model language that allows building owners and tenants to share the energy savings from building capital improvements.** Tenants and building owners often have a split incentive when it comes to energy efficiency improvements since tenants frequently pay the energy bills. New model language could make more capital improvements likely.

Industrial Buildings

1. **Continue to support a loan program to help businesses including industrial companies to become more energy efficient and expand their businesses.** A relatively small number of Minneapolis industrial customers are responsible for a large proportion of total energy usage in the City. Focusing efforts to increase the energy efficiency of these businesses can have a large impact, as well as increase the competitiveness of Minneapolis businesses and support job growth.

Renewable Energy

1. **Support efforts to align utility practices with city and state renewable energy policy**. State and local policies express a clear preference for renewable energy and distributed generation. The City thus supports efforts to reform or eliminate all practices that discourage property owners from adopting on-site renewable energy generation, including limiting standby charges, improving interconnection standards, modifying demand charges, expanding "net metering" benefits to large commercial/industrial businesses, and exploring concepts like feed-in tariffs. The City should continue intergovernmental relations efforts to reduce barriers and encourage development of renewable energy resources.

2. **Investigate the feasibility of large-scale renewable energy purchasing for the municipal government and/or residents.** The City routinely receives unsolicited requests to invest in bulk purchasing of renewable energy. Establish a proactive review process for these requests and/or explore an RFP process for bulk purchasing.

3. **Create policies and programs to incorporate renewable energy into commercial and residential buildings, with a firm commitment to small businesses and low-income residential.** A number of cities and states across the nation are creating long-term policy goals and setting in motion building code changes that anticipate the declining cost curve for both solar energy and energy efficiency.

- Develop a "solar-ready" building certification. Existing buildings were not built to accommodate solar energy installations; retro-fitting existing buildings adds significant costs to solar energy. Making new buildings "solar-ready" adds virtually no cost to construction costs. The next generation of the city's building infrastructure should accommodate the next generation of energy production.
- Encourage "net-zero" energy buildings. Net-zero energy buildings maximize synergies between energy efficiency and distributed energy generation. Policies in other states are anticipating building codes that require net-zero standards for residential buildings as soon as 2020. Minneapolis should plan to capture this transformative market trend through support of state efforts and creation of local incentives.

4. **Support new financing and ownership models for developing Minneapolis' solar resource**. Support explicit authorization of third-party solar leasing and ownership and enabling community solar projects, and other delivery/financial mechanisms (cooperatives, sustainable utilities, etc). Third party ownership and leasing models expand access to on-site renewable energy generation by simplifying the adoption process and enabling the cost-effective bundling of tax incentives, long-term financing, installation, and operation and maintenance into a single transaction. Minneapolis residents who do not own property or whose property has a poor solar resource should be enabled to own part of an off-site solar PV installation, and receive a share of the production credits on their utility bill.

Transportation and Land Use Goals

1. Reduce automobile vehicle miles traveled in Minneapolis while improving accessibility, increasing transportation choices and promoting and accommodating equitable opportunity and growth.
2. Support livable, walkable, bike-able, and growing neighborhoods that meet the needs of all Minneapolis residents.
3. Increase the share of Minneapolis residents and workers choosing non-auto modes for commuting and other trips.
4. Through local action and federal and state legislation, support a transition to cleaner fuels and more efficient vehicles.
5. Within transit oriented development, prioritize equity and opportunity for quality of life improvements for low income households and small businesses from American Indian and communities of color.

Planning & Land Use

6. **Integrate climate change reduction policies into the City's Urban Agriculture Plan and Food Policy Council efforts.** The support for perennial landscapes on public and privately held land in Minneapolis can help sequester greenhouse gas emissions and promote practices that are more adaptive to a changing climate. Support for urban forests as well as small-scale efforts across neighborhoods among the many cultural communities of Minneapolis should be supported since, in aggregate, they can have a considerable impact and serve to educate residents about climate change.

1. **Investments in the tree canopy should be targeted to achieve an equitable percentage of tree canopy across residential neighborhoods.** Tree canopy provides shade that is a cooling function (estimated at 20 degrees during summer months) reducing electrical demand. The tree canopy in Minneapolis is currently inequitably distributed in more affluent neighborhoods. Those communities with the largest Indigenous and People of Color and poverty stricken populations with the least ability to afford air-conditioning and/or invest in landscape improvements via shade tree plantings are those neighborhoods with the smallest percentage of tree cover. Reforestation should also occur in areas with tree cover lost to blight or storms and never replaced. North Minneapolis lost 6000 trees in the 2011 Tornado.

2. **Improve inter-departmental and inter-agency collaboration on transportation issues, and track progress.** City policy already instructs staff to work across departments on transportation and land use issues; it also recommends both formal and informal collaboration between the City and partners like the Metropolitan Council and Hennepin County. Add accountability to this policy direction by regularly reporting to the public and policymakers on the successes of recent collaborations, and challenges that may be hindering these partnerships.
3. **Plan for and encourage "complete neighborhoods."** Residents of complete neighborhoods can safely and conveniently walk to obtain most of the basic goods and services they need on a daily basis. Address historical and persistent inequities in health and wealth creation by implementing complete neighborhood strategies in low-income neighborhoods and surrounding census tracts. Explore changes to the zoning code to provide maximum flexibility for diverse commercial uses. This could include providing height or density bonuses for leasable ground floor commercial

spaces. This could also include "market development" strategies, which would remove barriers for small-scale retail and essential services like daycare centers.

4. **Focus growth along community corridors and near job centers like Downtown.** While supporting growth throughout the city, follow the adopted Comprehensive Plan to guide and zone for new, dense development along transit corridors to give residents and businesses multiple transportation options. Safeguards against gentrification along these corridors should be of the highest priority. Growth and job opportunities should be structured so that residents currently living along the corridors may benefit. Anti-displacement policies must be in place.

5. **Review the zoning code to identify impediments & incentives to the construction and retrofit of green buildings.** Further study may highlight opportunities to "green" the zoning code including:
    1. Exempt greenhouses from maximum height calculation on multi-story structures.
    2. Exempt additional wall insulation from FAR and setback calculations.
    3. Allow boiler rooms on the roof of buildings.
    4. Incentives in zoning to increase energy efficient construction, renovation and operation of buildings.

Active Transportation

1. **Work with the Metropolitan Council, Metro Transit, and low-income organizing and advocacy groups to survey low-income riders and communities about transit preferences and incorporate their feedback in a comprehensive transit-oriented development strategy.** The ultimate goal is to increase transit options for the poor that increase their quality of life and access to opportunity.
2. **Support the Metropolitan Council's goal of doubling regional transit ridership by 2030, while improving access and livability for lower income households most reliant on public tansit, but for whom the connections between transit and opportunity are not yet well organized. Restore the route cuts in poor neighborhoods.** Supporting this regional goal includes the build-out of regional transit lines, like Bottineau and Southwest LRT, but it also includes upgrading the Primary Transit Network identified in the Access Minneapolis plan. The PTN will provide convenient service for many destinations, and provide access to more non-work destinations.
3. **Achieve the City's adopted targets for bicycle mode share and bicycle counts and adopt a stretch goal of 15% for 2025.** The City has adopted targets for bicycle mode share of 6 percent by 2012 and 7 percent by 2014. In addition, the City has adopted a target to increased cyclists in annual counts by 60 percent over 2008 by 2014. Consider a mode share goal for 2025 of 15%.
4. **Construct 30 miles of on-street, protected bike facilities (cycle tracks) by 2020 to allow safe and efficient travel for all types of cyclists.** Bicycles are a zero-emissions form of transport. Addressing the perception of safety of on-street bicycle facilities will attract more cyclists to Minneapolis' network of facilities and help to meet mode share goals. Work to ensure that neighborhoods with little existing bicycle infrastructure are part of the discussion on what type of bicycle infrastructure would work for their communities, and receive equitable funds for implementing that plan.
5. **Revisit minimum bicycle parking requirements to support the City's bicycle mode share targets.** The City is investing in on- and off-street bicycle facilities, and has set targets for bicycle use. Providing sufficient parking that is convenient and safe will be a key in meeting these goals. Existing standards, such as the Association of Pedestrian and Bicycle Professional parking guide and the City's adopted workplace access and parking guidelines could be reviewed for

consistency with current code. Bicycle parking demand may also vary more based on geography than auto parking. More data on local parking demand is needed.

6. **Support implementation of the Pedestrian Master Plan and Bicycle Master Plan.** When walking and biking are safe, efficient, and comfortable, the benefits are felt community-wide and reduce dependence on automobiles. Monitoring and following up on the Pedestrian and Bicycle Master Plans' recommendations will be integral to meeting greenhouse gas reduction goals across the transportation and land use sectors.
7. **Allow special service districts to levy a surcharge on parking meters to fund streetscape improvements.** District advisory boards can opt to apply a streetscape improvement surcharge to on-street parking, the revenue from which would be used for street-scaping or other improvements that make walking, cycling, or taking transit more attractive.
8. **Make car-sharing convenient and affordable by reducing sales tax on car-sharing products to the minimum rate.** Currently, car-sharing transactions in Minneapolis appear to be taxed at a higher rate (~12 percent) than the general sales tax rate for Minneapolis (7.775 percent). Consider separating car-sharing services from regular rental car service in terms of special sales tax rates.
9. **Expand car-sharing services to on-street spaces.** Parking staff will soon begin the process to bring car-sharing services to on-street spaces in the city. Continue to expand these services as demand and feasibility permit.
10. **Continue "Safe Routes to School" efforts.** The City's Safe Routes to Schools effort encourages children to adopt healthy habits of walking and biking. This is done by improving safety near schools through infrastructure projects, as well as fostering a culture of walking and biking in the schools through educational programs.
11. **Support rapid expansion of the city's bike program with bikes and bike racks available more readily in low to moderate income neighborhoods**
12. **Adopt a Complete Streets policy**. A Complete Streets policy will demonstrate a commitment to providing adequate pedestrian, transit and bicycle facilities during every road improvement project. While the City already has adopted many elements of Complete Streets work, such as Bicycle and Pedestrian Master Plan and a multi-modal transportation plan, such a policy may be necessary to best position the City to receive outside funding.

Parking Management

1. **Investigate demand-based parking pricing strategies for metered areas.** The city's new parking meters allow for variable pricing. Vary pricing on metered streets, with a goal of achieving one empty spot per block, in order to reduce "cruising" for spots and improve traffic flow.
2. **Continue to adjust minimum parking requirements to better promote alternative modes of transportation.** For example, developers of multi-family housing currently qualify for a 10 percent reduction in required parking stalls if the parcel is within 300 feet of a transit stop, even though one-quarter mile (1,320 feet) is commonly accepted as the distance an average rider will walk to a bus stop.
3. **Support the development of new information technology to reduce "cruising" for parking and make more efficient use of curb & ramp space.** Parking staff are developing new approaches, such as a mobile phone app, which will provide more information to drivers on the location of vacant parking spaces. These types of applications can reduce cruising for parking, which can be a significant source of congestion in certain parts of the city at certain times.
4. **Support the development of a citywide framework for curb space use.** Parking staff will be developing a framework plan to understand how to best use curb space, both for parking, valet

services, active transportation and other uses. Climate Action Plan goals for increasing active transportation and holding VMT flat should be considered during this process.

5. **Require or incent parking "unbundling".** Adopt requirements or incentives for developers that parking be separated from commercial space and residential units in lease and sale agreements.

Transportation Demand Management & Intelligent Transportation Systems

1. **Support the Downtown Transportation Management Organization's goal to reduce 4.8 million drive alone trips by 2015.** The Downtown TMO helps commuters get into downtown with less reliance on the single- occupancy vehicle. Supporting their goals include increasing bicycling, transit and rideshare use.
2. **Explore changes to signal timing to reduce idling, improve traffic flow and accommodate non-auto modes.** City staff are currently reviewing signal timing on a citywide basis. Potential changes to reduce emissions could include "green waves", either for cars or cyclists, depending on the roadway and changing lights to flashing red/yellow late at night and early in the morning.
3. **Support the expansion of congestion pricing, dynamic signage and other traffic management techniques on regional highways.** Demand-based pricing can help reduce congestion while encouraging carpooling and transit use. Other techniques that have proven beneficial are dynamic signage which can help reroute drivers and rapid response to crashes.
4. **Encourage large, medium and small scale employers to embrace alternative work arrangements for employees.** Results

   -Only Workplace Environments (ROWE), variable work schedules, telecommuting, and teleconferencing all have the potential to reduce overall trips or spread trips from rush hour into less-congested times. The City can collaborate with the downtown TMO, Downtown Council, and other organizations to provide businesses with information and expertise on these practices.

Clean Fuels

1. **Explore regulatory incentives to increasing electric vehicle charging infrastructure.** The inclusion of electric vehicle charging could be incentivized through the zoning code or other city regulations for large multi-family and commercial buildings. As technology and adoption rates of electric vehicles change, the city should revisit these incentives and consider requirements for EV charging in parking code for multi-family and commercial buildings as appropriate based on demand.
2. **Provide electric vehicle charging stations at City-owned facilities where feasible.** Continue to investigate the feasibility of vehicle charging stations at public facilities as funding allows. Closely monitor electric vehicle technology to ensure investments are appropriate.
3. **Increase the fuel efficiency of the city's licensed taxi and car service fleet.** The City's current requirement for taxi vehicles is to achieve 23 mpg or better in city driving. As the City updates this policy, consider increasing the minimum mpg requirement. Given that taxis are high-mileage vehicles, better fuel efficiency can pay off more quickly than in other applications.
4. **Support the proposed Federal fuel efficiency improvements.** On-road vehicle fuel efficiency has a significant impact on the transportation sector emissions in Minneapolis. Changes to the Federal CAFÉ standards will increase the fuel efficiency of vehicles on the road.
5. **Support increased fuel efficiency in public fleets.** Minneapolis has adopted a green fleets policy which calls for fuel efficiency improvements in City-owned vehicles and equipment. Support the

efforts of entities like the Metropolitan Council and the State of Minnesota to improve the fuel efficiency of their fleets. In particular, hybrid or fully electric buses have the added benefits of reducing noise pollution and localized air pollutants like particulates in high-traffic areas.

6. **Support state efforts to adopt a low-carbon fuel standard.** As outlined in the Minnesota Climate Change Advisory report, support the adoption of a statewide Low-Carbon Fuel Standard, with a goal of reducing the lifecycle carbon intensity of transportation by 12% by 2025 from 2007 levels.
7. **Support the development of alternative jet fuels and ensure MSP is prepared for their increased use.** Most emissions attributable to MSP are produced by jet aircraft. Domestic and foreign airlines have successfully trialed a variety of biofuels, which have been approved for use in commercial flights since July 2011. As production chains mature, MAC and its airline partners will need to be sure MSP facilities are adequately prepared to store and dispense biofuel-blended jet fuel. Minneapolis should also support future regulatory actions designed to accelerate the switch to cleaner-burning jet fuels.

Other

1. **Continue to shift to LED streetlights.** Replacing conventional bulbs with LEDs can net up to a 50 to 60 percent reduction in energy use. As capital costs come down, continue to replace older bulbs with more efficient LEDs, with a long term goal of citywide LED use. Focus replacement efforts in neighborhoods first, where lights most need to be replaced, expanded and upgraded. Provide financial assistance or alternative financing mechanisms so that burden of upgrade/replacement does not fall on property owners in lower-income neighborhoods.
2. **Support continuing efficiency efforts at the Minneapolis-St Paul International Airport.** Increasing vehicle fuel efficiency has led to a reduction in greenhouse gas emissions from the airport. Investigate additional partnership opportunities to support the Metropolitan Airports Commission in meeting the state greenhouse gas reduction targets.
3. **Assist the Metropolitan Airports Commission in making MSP the nation's "greenest" airport.** MAC's Stewards of Tomorrow's Airport Resources program identifies numerous projects that could reduce the airport's emissions, ranging from on-site clean energy production to grey water recycling and storm water reclamation. The airport's constant flow of travelers also makes it an excellent location for demonstrating green technologies and educating the public about the causes and impacts of climate change.
4. **Encourage the Metropolitan Airports Commission to purchase a part of its electricity through Xcel Energy's Windsource program.** The Windsource program provides dedicated renewable electricity to customers for an increased fee.
5. **Encourage the State of Minnesota to permit the testing of autonomous vehicles on public roadways.** In the long term, autonomous vehicles have the potential to reduce the total number of vehicles on the road, increase fuel efficiency and increase safety for cyclists and pedestrians, all of which could have a positive climate impact. Permitting the testing of these vehicles will signal to industry that Minnesota is eager to explore this new technology.

Waste & Recycling

Goals

1. Achieve a **zero percent growth rate** in the total waste stream from 2010 levels.
2. **Recycle 50 percent of the waste stream** (commercial and residential) in Minneapolis by 2025.
3. **Increase organics collection to 15 percent** of the waste stream by 2025.
4. Reduce the flow of wastewater from Minneapolis and support efforts to make wastewater treatment more energy efficient.
5. **Increase awareness of the lifecycle impacts of products** to address GHGs occurring outside the community.

Reducing Waste

1. Identify consumer products and packaging that are neither recyclable nor compostable and engage companies, consumers and retailers in a campaign to reduce the disposal of such products and packaging through reuse efforts, switch to alternative materials, or make changes to the supply chain. In addition, the City should participate in and support the efforts of the MPCA Product Stewardship Council.

2. Identify and promote reuse and repair businesses and opportunities which can reduce the disposal of used goods. Evaluate existing ordinances and remove barriers for reuse and repair opportunities. Connect with the State's reuse network. Examples include "fix-it clinics" or promoting existing businesses with a reuse focus.

3. Work with Hennepin County and MPCA to ensure that as waste reduction goals are met within the city, emissions and activity at HERC are not increased due to waste shipments from outside the city limits. Every effort must be made to remove high recycle potential material in this waste stream (which also has a high BTU content). Emissions must be closely monitored so as not to add to cumulative health burden of surrounding neighborhoods.

4. Work with Hennepin County to ensure that a strong residential and business CFL and recycling education and collection program is developed and monitored.

3. Work with Hennepin County and other partner organizations to encourage businesses and residents to purchase reused and reusable goods (Choose to Reuse campaign).

4. Expand Green Building programs (such as a requirement for city-financed new construction and renovation projects) to promote a reduction in construction and demolition waste.

5. Expand neighborhood and backyard organic composting through community initiatives across neighborhoods and advocate for updated composting rules at a state level.

6. Develop innovative marketing and behavioral strategies. Examples could include behavioral strategies to reduce food waste like signage and reducing tray use, and supporting County efforts for expanded outreach to commercial and multifamily properties.

7. Undertake a public education campaign to inform residents about opt-out opportunities for material

like phone books and junk mail. Additionally, explore requiring that businesses like phone directories operate as an opt-in service in Minneapolis.

8. Work with Hennepin County, regional groups and the State of Minnesota to develop better data collection tools and sources, especially for commercial and multifamily waste data.

9. Require City-financed development projects to meet a green building standard (see Buildings & Energy Cross-Cutting Strategy 5) that includes a waste reduction and/or recycling standard. Projects that receive State money must meet Minnesota Green Communities standards, which include rules about construction and debris waste and recycling infrastructure. The City of Minneapolis should follow suit in order to support its existing waste reduction and recycling goals, and to reduce GHG emissions.

Increasing Recycling

1. Support implementation of a single-sort recycling program for curbside pickup.

2. Continue to expand the types of materials accepted by the City's recycling program. Analysis (health, etc) must be done to ensure any expansion or new recycling facility does not disproportionality burden already existing environmental justice communities in its construction and operation.

3. Assess community health impact of increased truck traffic and diesel, fine particulate matter emissions, that could result from expanded or new recycling operations. This includes increased truck traffic routes from collection of materials, as well as truck traffic and facility site.

3. Complete a comprehensive assessment of pricing incentives and penalties for residential waste and recycling services and identify strategies, such as volume-based variable-rate pricing, that could increase recycling and reduce waste.

4. Enforce the commercial recycling ordinance and undertake an educational campaign to expand recycling options in multi-family housing. The City of Minneapolis will investigate creating standards for commercial office buildings that require building owners to be responsible for source separating refuse into recyclables and trash and work with on-site janitors and other affected workers to create effective source separation programs.

5. Identify financial and other barriers to recycling in multi-family buildings (different priorities between property management company and tenants, lack of knowledge of costs, etc.).

6. Work with the County to increase the rate of recycling of construction and demolition debris in the city.

7. Support state adoption of the new International Green Construction Code (IGCC) and adopt the IGCC locally (see Buildings & Energy Cross-Cutting Strategy 3). The IGCC includes requirements for diverting construction and debris waste and incorporating recycling infrastructure in the design of projects. If the IGCC is adopted at the state level as an appendix chapter, Minneapolis will need to adopt it locally before it can be in force.

Increase the Composting of Organics

1. Identify major organic waste producers (food service, schools, hospitals, etc.) and conduct a targeted

campaign to increase organics recycling. Identify corridors (Nicollet Avenue, for example) with a critical mass of large producers that might make organized collection more feasible. Consider an ordinance requiring large producers to divert organics. Closely collaborate with workers and unions to ensure the meeting of composting goals do not compromise worker health and safety, or unduly increase work load.

2. Based on the results of pilot programs and through a detailed study, determine the feasibility and costs of expanding the collection of source-separated organics at residential properties citywide. After these costs are known, reassess the best approach for removing organics from the residential waste stream. Any study must assess community health impact of increased truck traffic and diesel, fine particulate matter emissions, that could result from expanded or new composting operations. This includes increased truck traffic routes from collection of materials, as well as truck traffic at facility site.

3. Support more options for the local processing of organic waste at both large and small scales. There are currently few options for processing collected organic waste in the Twin Cities region. Changes to state and county rules, or a stronger local market for organic composting may be necessary to build more processing capacity. Analysis (health, etc) must be done to ensure any expansion or new composting facility does not disproportionality burden already existing environmental justice communities in its construction and operation.

4. Make City worksites a model for organics composting by developing a collection program for city-owned and (where possible) city-leased buildings.

Addressing Product Lifecycle Impacts

1. Work with Homegrown Minneapolis to incorporate more information on food choice impacts, particularly as it relates to greenhouse gas emissions.
2. Develop educational materials that illustrate the emissions impacts of common products or behaviors, and include these materials in city utility bills.

Reducing Wastewater Treatment Impacts

1. Work with the Metropolitan Council to achieve their energy use goals and track associated impacts on GHG emissions from Minneapolis contribution to wastewater flows.

2. Achieve a 75% participation rate in the Community Energy Services program for eligible Minneapolis properties, which includes low-flow water fixture information and installations.

3. Explore options for expanding the use of greywater systems and water conservation measures in public and private buildings. This could be included in the local adoption of the new state building codes as an elective or promoted in city-financed projects.

Additional Issues

The issues of water, drought and tree canopy were ones members of the EJ Working Group felt were additional issues needing a more robust discussion in the Minneapolis Climate Action Plan. The following is a discussion of these issues.

Drought

Minneapolis is currently in a state of severe drought. Climate change will likely continue to create unstable water supplies due to fluctuations in precipitation rates. Minnesota water levels overall are currently rivaling the levels from the drought in 1988. Commercial users are being told to stop drawing water from streams and use alternate sources. Reduced water in rivers and streams threatens businesses, agriculture, human health, water quality, fish and wildlife.

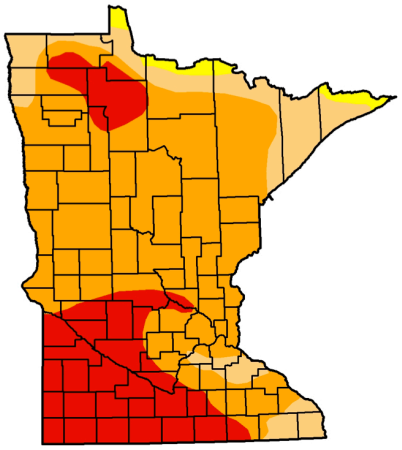
U.S. Drought Monitor

December 11, 2012
Valid 7 a.m. EST

Minnesota

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	97.84	83.44	25.25	0.00
Last Week (12/04/2012 map)	0.00	100.00	97.84	83.44	25.25	0.00
3 Months Ago (09/11/2012 map)	16.50	83.50	44.39	28.02	4.22	0.00
Start of Calendar Year (12/27/2011 map)	0.79	99.21	57.45	24.08	0.00	0.00
Start of Water Year (09/25/2012 map)	1.92	98.08	77.45	35.36	18.51	0.00
One Year Ago (12/06/2011 map)	0.81	99.19	56.68	24.08	0.00	0.00



Intensity:
- *D0 Abnormally Dry*
- *D1 Drought - Moderate*
- *D2 Drought - Severe*
- *D3 Drought - Extreme*
- *D4 Drought - Exceptional*

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

http://droughtmonitor.unl.edu

Released Thursday, December 13, 2012
Rich Tinker, Climate Prediction Center/NCEP/NWS/NOAA

The Minnesota Statewide Drought Plan Matrix identifies actions that will trigger an emergency declaration. An emergency declaration is of Environmental Justice significance because the resulting action is consideration for a request to the Army Corp of Engineers to

draw down the Mississippi River Headwaters Reservoirs. This pits the City of Minneapolis interests against the Treaty Rights of the Minnesota Chippewa Tribes. In 1988 this action occurred and destroyed the wild rice crop in associated waters. Wild Rice is the primary food and an economic natural resource for Minnesota's Anishinaabeg (Chippewa) and is a protected Treaty Right. A Mississippi River Headwaters Reservoir draw down can only be done to meet health and safety needs.

Thermal pollution from nuclear and coal fired power plants discharged into the Mississippi River during a drought has the potential to violate the utility's permit standards and destroy aquatic life and damage water quality. NSP, now Xcel Energy, voluntarily reduced electrical production at its Monticello Nuclear Reactor during the 1988 drought because of thermal pollution levels in the Mississippi River. This de-rating of their nuclear capacity caused the utility in 1989 to lobby for legislation to establish them as a priority for water use.

- ***The City of Minneapolis Climate Action Plan should prepare for a drought condition that causes river intakes and groundwater appropriation pumping to be insufficient to meet consumer requirements. Alternatives that exist for water priorities at the nuclear reactors and coal- fired plants should be identified.***

Tree Canopy

Trees hold a vital place in our lives and communities. Trees reduce storm water run off, and provide beauty and shade. Less volume of storm water run off requires less wastewater treatment and shade that provides a cooling function (estimated at 20 degrees during summer months) are both benefits that increase electric energy efficiency thereby reducing electrical demand.

Added benefits include:

- Health benefits from improved air quality due to increased oxygen and reduced pollution from CO_2, NO_2, SO_2 and PM_{10} and heavy metals,
- Food (fruit/nuts/teas/herbs) flowers, medicine,
- Ceremonial spiritual,
- Noise reduction,
- Enhanced community vitality, stability, public safety,
- Increased property values,
- Garden and landscaping mulch from leaves/wood chips,
- Fuel

The City of Minneapolis' program that mapped the tree canopy in 2009 is a commendable effort to identify where to make the investments in improving these vital natural benefits. The stated goal of the City's program is to maintain a 31% tree cover through 2015. A limitation with the City's tree canopy report is a statement that acknowledges, "There are

many factors that determine where trees are planted and maintained," but the report does not identify those priorities. *The Climate Action Program omits trees from the carbon dioxide reduction strategies altogether.*

Whether by accident or design the tree canopy in Metropolitan Minneapolis is inequitably distributed in more affluent neighborhoods. Those communities with the largest Indigenous and People of Color and poverty stricken populations with the least ability to afford air-conditioning and/or invest in landscape improvements via shade tree plantings are those neighborhoods with the smallest percentage of tree cover. This pattern dominates the over all mapping, however it is not exclusive.

This EJ analysis uses the City of Minneapolis Tree Canopy Mapping Project data to demonstrate the inequity of the existing tree canopy in the city. Below are examples of neighborhood locations. Sites are listed with existing tree canopy and the percentage of possible additions on lands with bare soil, grass or shrubs, and the percentage of possible additions with impervious ground covers that would need to be removed and hauled away. The remaining percentage points in each neighborhood are covered with infrastructure such as buildings and roads, or water bodies and are unsuitable for tree additions at these designations and are not presented here. Overall poverty rates in each neighborhood are also listed using City of Minneapolis Neighborhood demographics. Poverty statistics posted on the City's website for neighborhoods however are from the years 1999/2000. The percentage % of each of the listed neighborhoods populations, which are identified as "White" in City demographics, is shown for illustrative purposes.

These Minneapolis Neighborhoods have the greatest need for additional tree canopy investment by the Climate Action Plan program. The poverty ratios are between 19% and 42% with significant majority ethnic populations (with the two exceptions explained further in Notes).

	Existing Tree Canopy	Possible Additions	Possible Additions w/Impervious Removal	% Below Poverty	Race %White
Cedar Riverside	21.01%	18.17%	21.53%	42%	41%
Elliot Park	13.32%	11.39%	33.48%	38%	50%[1]
E. Phillips	27.28%	17.03%	18.99%	33%.....}	24%
Midtown Phillips	27.24%	17.03%	18.99%	28%.....}	for all 4
W. Phillips	19.85%	16.96%	25.79%	35%.....}	Phillips
Ventura Village	20.95%	18.93%	23.43%	38%.....}	
Harrison	29.35%	25.57%	20.38%	37%	22%
Hawthorne	22.03%	18.53%	23.89%	41%	19%
Near North	23.57%	23.58%	21.22%	32%	12%
Marshall Terrace	13.74%	17.12%	40.46%	19%	74%[2]
McKinley	26.09%	21.47%	20.88%	21%	29%
Whittier	28.28%	13.77%	22.83%	25%	47%

Notes:

(1) Elliot Park has had recent housing redevelopment investment in 179 new apartments. The ethnicity has drastically changed from primarily white in 1980 to a growing Hispanic and Black neighborhood.

(2) Marshall Terrace is primarily industrial, utilities and railroads. The neighborhood population has dramatically changed from 97% white in 1980 to 74% in 2000, with a growing Hispanic community at 8% and other ethnicities rising as well.

More affluent neighborhoods for comparison have a larger percentage of tree canopy as well as less land covered with an impervious surface. The percentage of families below the poverty level in these communities is greatly reduced, while the racial composition of the neighborhood is significantly less diverse.

	Existing Trees	Possible Additions	Possible Additions w/ Impervious Removal	%Below Poverty	Race %White
Audubon Park	41.60%	20.01%	11.20%	6%	81%
Bryn Mawr	45.54%	21.28%	11.84%	2%	92%
Cooper	46.08%	14.13%	8.44%	4%	87%
East Harriet	35.96%	19.92%	5.84%	1%	91%
Fulton	47.33%	16.97%	9.28%	2%	94%
Hiawatha	41.86%	16.84%	11.56	4%	86%
Howe	44.05%	16.59%	11.61	5%	76%
Kenwood	42.41%	22.72%	3.31%	3%	93%
Linden Hills	43.29%	17.70%	6.67%	4%	93%
Lynnhurst	48.71%	15.47%	6.12%	1%	94%
Minnehaha	43.54%	22.15%	9.83%	4%	86%
Waite Park	42.81%	23.84%	10.45	3%	87%

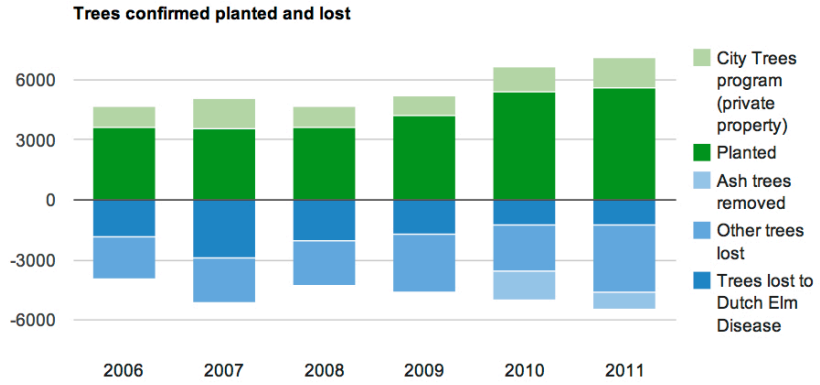
Approximately 32,800 trees were planted in the City of Minneapolis since 2003. The tree planting program of the Minneapolis Park and Recreations Board and the City Tree Program with the Tree Trust (non-profit) to maintain the City's 31% tree canopy target goal of planting 6,000 trees per year still barely equals replacement of lost trees. Dutch elm disease, emerald ash borer, Asian long-horned beetle, gypsy moth, sudden oak death, and other causes, including severe storms are identified causes of forest death. Emerald ash borer alone has the potential to wipe out 22% of the tree canopy in the City of Minneapolis.

- ***The Climate Action Plan should have a tree canopy policy that achieves an equitable percentage of tree canopy across all neighborhoods.***

Sustainability Indicators

A Healthy Life | Greenprint | A Vital Community

Trees Lost and Planted



(Chart from the City of Minneapolis Sustainability Department web site)

Minneapolis Neighborhoods Damaged by North-side Tornado

The North Minneapolis tornado destroyed more than 6,000 trees in North Minneapolis on both public and private lands. Increased frequency of violent storms is a mark of climate change and thousands more trees have not been replanted in the damaged North Minneapolis Neighborhoods.

Tree canopy distribution in the chart below with an *asterisk denotation signifies the neighborhoods with the most damaged areas. (See attached map) These tree canopy statistics are no longer accurate. Racial distribution and poverty rates have also likely changed from the reported numbers on City Neighborhood pages due to destruction of homes and businesses.

City Park and Recreation however have replanted 3,100 trees on boulevards in the damaged neighborhoods. Replanting has occurred in Folwell Park (275 trees) and Tree Trust assisted homeowners with 400 trees paid for by State Farm Insurance and other donations. The Lopett Foundation replanted a section of Theodore Wirth Park (TWP) (75 trees) and Xcel Energy replanted Glenwood/Wirth Parkway intersection. More than 300 trees were uprooted in Theodore Wirth Park from this violent storm.

Existing Tree Canopy	Possible Additions	Possible Additions w/Impervious Removal	%Below Poverty	Race %White

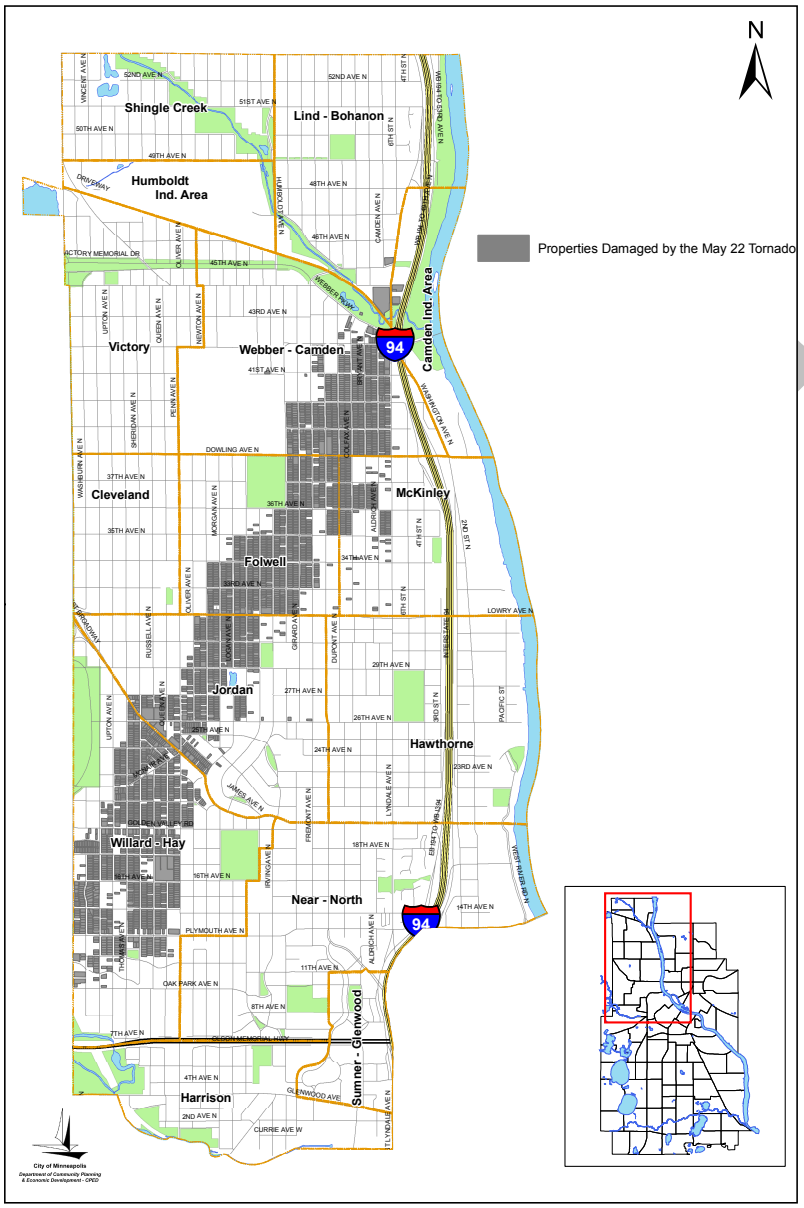
*Willard Hay	47.33%	25.28%	9.40%	27% (TWP)	15%
*Webber Camden	32.99%	33.31%	12.25%	16%	47%
*Folwell	41.22%	22.60%	9.86%	16%	37%
*Jordan	39.50%	25.28%	13.80%	20% (TWP)	21%
McKinley	26.09%	21.47%	20.88%	21%	29%

These five neighborhoods are not included in the previous charts because the tree canopy data for existing trees as well as other possible additions on various land parcels are no longer accurate due to the massive loss of tree life and infrastructural damage from the 2011 tornado. Replacement data available is cited in the above paragraph.

- ***The City's Climate Action Plan should plan to replace the remaining storm destroyed trees. Many of the remaining lost trees are on private lands.***

(Note: the word "White" is used on the City of Minneapolis Neighborhood demographics Populations pages, it is used here for consistency).

North Minneapolis Tornado Impacted Area



Brett Costain/Jill Kiener | Northside Home Fund | 4.27.12
Source: Regulatory Services